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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,532	06/24/2003	Philip James Jenkinson	4398-239	1755
23117	7590	05/22/2006	EXAMINER	
NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				NASRI, JAVAID H
ART UNIT		PAPER NUMBER		
		2839		

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/602,532	JENKINSON ET AL.
	Examiner	Art Unit
	Javaid Nasri	2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 March 2006.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-17 and 19-34 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-10, 13, 14, 19-24 and 27-34 is/are rejected.
 7) Claim(s) 11, 12, 15-17, 25, 26, is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 24 June 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>4/4/2006</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the

- a) The sloping surface has a substantial planar configuration,

Must be shown **clearly** or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 11, 12 and 29 are objected to because of the following informalities:

- a) In claim 11, line 1, "the retaining clip" lacks antecedent base.
- b) In claim 29, "The first end of the retainer is pivotably mounted on the socket" is already in claim 10.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 13, 14, 19, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawaguchi et al (6,102,727).

Kawaguchi et al discloses, **for claim 1**, a plug (80) including a lug (see marked figure 4A); a socket (2) to interface with the plug; and a retaining clip (38) including a lug engaging mechanism (46) structured to allow disengagement of the plug from the socket at a predetermined release force applied to the plug (the predetermined force is not defined in the claim, therefore any force can read on the claim), the retaining clip being movably positioned with respect to the socket for movement between (1) a non-plug-retaining position (see figure 4A), and (2) a plug-retaining position (see figure 4B) wherein a sloping surface (32a) of the lug engaging mechanism engages the lug (see figure 4B), the sloping surface having an angle that is

at least partially determinative of the predetermined release force (the curved surface of 32a has an angle with the tangent drawn on the curved surface, by changing the curvature of the curved surface, the angle changes and the amount of curvature of the curved surface determine the force to some extent), wherein the retaining clip is movable between the non-plug-retaining position and the plug-retaining position while the plug is engaged with the socket (see figures 4A and 4B), **for claim 2**, the plug is configured to disconnect from the socket at a predetermined release force and wherein the plug retaining assembly is reconfigurable so that after the plug has disconnected due to being subjected to at least the release force, the plug may be reconnected to the socket and remain connected to the socket until again subjected to the release force, **for claims 3**, in use, the plug is disconnectable from the socket by application of a withdrawal force that is substantially less than the release force required to disconnect the plug from the socket when the retaining clip is used, **for claim 13**, the plug includes at least one pin receiving slot that is adapted to receive respective pins provided on the socket (pins of the socket are shown in figure 4A, the corresponding slots in the plug are not shown), **for claim 14**, pair of lugs (see marked figure 4A, attached), **for claim 19**, the retaining clip includes a groove (see marked figure 4B, attached, see note below) adapted to receive an upper portion (depends on the orientation of the plug) of the plug when the retaining clip is in the plug retaining position, **for claim 30**, the sloping surface has a substantially planar configuration (see marked figure 4B, attached), **for claim 31**, the sloping surface is adapted to disengage from the lug at the predetermined release force,

Note: USPTO interprets claims, giving claims their “broadest reasonable interpretation.”

(See, e.g., *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997)).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maegawa (6,655,971).

Maegawa discloses, **for claim 10**, a first connector (20) having a first end and a second end opposite the first end, the second end including a lug (25, 26), a second connector (10) having a receptacle to receive the first end of the first connector (20), the second end of the first connector including the lug (25, 26) being exposed when the first connector is engaged with the second connector (see figure 1); and a retainer (30) having a first end and a second end, the first end being pivotably mounted on the second connector and the second end being engaged with the lug such that the lug is positioned between the retainer and the second connector (see figure 4, depends which part of the retainer and the second connector are considered), **for claim 29**, the first end of the retainer is pivotably mounted on the second connector to rotate about an axis (14, 33) adapted to intersect a longitudinal axis of the plug in use.

However, Maegawa does not disclose:

- a) For claim 10, the first connector as a plug and the second connector as a socket. It would have been obvious to one having ordinary skill in the art

at the time the invention was made to the first connector as a plug and the second connector as a socket since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167.

7. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi et al.

Kawaguchi et al discloses all the limitations of claim 1, as shown above,

However, Kawaguchi et al. does not disclose:

a) For claim 20, the predetermined release force is between about 100-300 N.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the predetermined release force to be between about 100-300 N, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

b) For claim 21, a second plug, a second socket, and a second retaining clip, wherein the retaining clip and second retaining clip is rotatable in opposite directions. Since there is no relation shown between the two groups, the claim reads on a similar second pair of plug and socket, in order to have multipurpose assembly.

8. Claims 4-9, 22-24, 27, 28 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawaguchi et al.

Kawaguchi et al discloses all the structural limitations of claims 4-9, 22-24, 27, 28 and 32-35, as shown above, however, Kawaguchi et al does not describe the method as claimed. The claimed method language is counter part of the apparatus claimed. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to develop a particular method for the disclosed apparatus of the cited references.

Allowable Subject Matter

9. Claims 11, 12, 15-17, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

REASONS FOR ALLOWANCE

10. The following is an examiner's statement of reasons for allowance:

The reason for allowance of the claims is the inclusion of the limitation,

- a) For claim 15, none of the prior art teaches or suggest, alone or in combination the retaining clip includes a pair of tabs positioned at respective ends of a pair of arms, the tabs adapted to engage with respective lugs of the plug to maintain the retaining clip in the plug retaining position, **in combination with other limitations in the claim** which is not found in the prior art reference of record.
- b) For claim 25, none of the prior art teaches or suggest, alone or in combination the retaining clip includes a pair of arms and a bridge piece that interconnects the pair of arms, the bridge piece providing the sloping surface, **in combination with**

other limitations in the claim which is not found in the prior art reference of record.

- c) For claim 11, none of the prior art teaches or suggest, alone or in combination the retaining clip includes **a pair of pins** that insertable within respective bores provided in lugs of the socket to enable pivotal movement of the retaining clip about the pins, **in combination with other limitations in the claim** which is not found in the prior art reference of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Response to Arguments

- 11. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

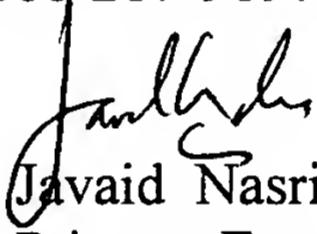
Contact

- 12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Javaid Nasri
Primary Examiner
Art Unit 2839



Jhn
May 17, 2006

